

REMARKS

BY

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ON

**CHEMICAL SAFETY
AND INTEGRATED SAFETY MANAGEMENT (ISM)**

DOE/EFCOG WORKSHOP

DECEMBER 14-16, 1999

DOE FORRESTAL AUDITORIUM, WASHINGTON, DC

I am pleased to participate once again in a DOE/EFCOG sponsored workshop on Chemical Safety. The previous workshop I attended on this subject was marked by a dominant attendance by ES&H support staffs and very little attendance by those whose job it is to plan and do hazardous work. While I applaud the work of those trying to promote greater awareness of chemical hazards and the need to address them, the experience with other narrowly focused safety initiatives is that those whose job it is to design and execute hazardous activities must be involved.

Because the Department of Energy has the unique authority to prescribe and enforce nuclear safety requirements under the Atomic Energy Act, nuclear safety has been for years the dominant focus of safety management programs of DOE. Such narrow focus is not sufficient to satisfy the protective measures demanded of our society today. These measures are marked by statutory and regulatory requirements that restrain and control the uses of many kinds of chemicals that pose threats to the health and welfare of workers, the public, and the environment. To the extent that DOE's missions require use of such materials, DOE and its contractors must comply.

I am glad to see that a representative of the Center for Chemical Processes Safety will be participating in this workshop. I do not believe that either DOE or EFCOG has made as effective use of practices that the chemical industry in recent years has brought to bear on hazardous chemical operations. These practices are not just a response to statutory and regulatory pressures but a recognition of the importance a record of safe operations is to its economic viability. With respect to requirements, there is today a substantial body of law that pertains to protection of people and the environment from undue exposures to toxic and hazardous materials—the Clean Air Act, the Clean Water Act, the Toxic Substances Control Act, the Resource Recovery and Reclamation Act—to name a few. These apply to Government owned and operated facilities as well as the commercial industry. Since the statutory and regulatory requirements are the same, I believe that many of the practices devised by the chemical industry in response should be particularly useful to DOE.

As many of you know, I have been devoting much of what remains of my professional life to the concept of Integrated Safety Management (ISM). What I have been trying to do is to get people to think outside of the nuclear box—because—the safety management required of DOE contractors is much more than nuclear safety.

I received a note a week or so ago from a former colleague. He is still in the safety consulting business. He told me that he was recently hired to help one of DOE's contractors on a nuclear project. His first task is to help develop an "Integrated Regulatory Compliance Plan." That task indicates the contractor is aware that constraints within which he must design and operate his nuclear facility are much broader than nuclear safety. What he will put together is a compendium of statutory and regulatory requirements for the protection of the public, workers and the environment. A large fraction of these will be for protection against non-radioactive hazardous materials and environments.

Now I mention this because the reality is that even the most capable of EFCOG Project Managers cannot initially be expected to be conversant with all the regulatory constraints under which his assigned mission is to be performed. Project Managers must rely upon subject matter

experts for help. DOE Project Managers, on the other hand, have too often hidden behind general contract language that requires the contractor “to meet all applicable federal and state regulations.” Such vague “all applicable” language reminds me of the English Professor I had as a college freshmen. He cautioned against the indiscriminate use of the word “etcetera” or its abbreviation. He said “it is a dead giveaway that you do not know enough to finish your thought.”

I submit that it is just as important that DOE and its contractors mutually agree up front on the applicable requirements for achieving chemical safety as is done for nuclear safety. The “DEAR Clause” covering ISM calls for the identification of both statutory requirements (List A) and those established as contract terms (List B). One needs to ask, is this being done? If not, why not? It cannot be the lack of guidance. DOE Guide 450.4-1A, May 27, 1999, *Integrated Safety Management System Guide*, provides a listing of Statutes and DOE Orders pertaining to this matter. This Guidance notwithstanding, use of it is not yet well made.

I asked the Board staff a number of months ago to look at a representative sample of DOE site contracts relative to safety requirements. Five sites were surveyed. Of the five, only the Savannah River contract explicitly called out RECRA and CERCLA. Presumably all other sites rely upon the ‘all applicable’ provision to cover chemical safety.

One of the more comprehensive listing of safety requirements has been put together by the regulatory unit supporting the design phase of the Office of River Protection Project HLW Vitrification Facility. Yet that unit is overseeing, NRC style, only the nuclear safety requirements, leaving the line project managers the task of identifying and working directly with the external regulatory authorities, EPA and Washington State, on matters directly related to chemical safety.

A fundamental premise of integrated safety management is that safety is to be managed as an integral whole and not by parts. We have not yet completely achieved such integration. We must make sure that in this initiative to heighten awareness and actions to better address chemical safety we do not compromise our integration objective. ISM was never intended as an agglomeration of individual protective sector and media protective programs but rather the management of all of these as an integrated whole.

With respect to requirements for ensuring chemical safety, I believe we are already inundated and hardly need more. On the other hand, response to those requirements has not been as rigorous nor as systematically developed as for nuclear safety ones. Integrated safety management offers the management structure to deal with this matter. However, my impression is that what we have been calling the “mechanisms” or practices for establishing the needed controls have not been so well established. Having made this observation, I am not suggesting that DOE embark immediately on a frenzy of guides development.

In summary, let me leave you with these thoughts:

- The basic format for the discussions is “chemical safety as an integral part of integrated safety management.” I believe this to be the proper context within which this matter needs to be explored.
- Industry has responded to EPA and State pressures for control over toxic and non-nuclear hazardous materials. Before heading off to develop new requirements or guides, particularly at the headquarters level, inventory the requirements and guidance that currently exists.
- ISM is a standards-based management program. Every site is expected to identify that set of requirements to which they agree contractually to perform their work. These are referred to contractually as “List A” and “List B.” Chemical safety requirements should be a part of these lists.
- Historically, lack of requirements has not been the problem of chemical vulnerability. It has been lack of effective implementation.
- DOE’s path forward might best be a dual path—one for old facilities and the other for new designs.